



# Iron Horse Park

## North Billerica, MA

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND



**THE SUPERFUND PROGRAM** protects human health and the environment by locating, investigating, and cleaning up abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

### YOUR OPINION COUNTS: OPPORTUNITIES TO COMMENT ON THE PLAN

EPA is accepting public comment on this cleanup proposal until Wednesday, November 24, 2010. You don't have to be a technical expert to comment. If you have a concern or preference regarding this proposed cleanup plan, EPA wants to hear from you before making a final decision on how to protect your community. EPA also is requesting public comment concerning its finding that the proposed alternatives are the least damaging practicable approaches for protecting wetlands. In addition, EPA is proposing a finding under the Toxic Substances Control Act that the risk-based PCB cleanup level would not pose an unreasonable risk of injury to health or the environment. See page 4 for more details. Comments can be sent by mail, e-mail, or fax. People also can offer oral or written

comments at the formal public hearing (see page 11 for details). If you have specific needs for the public hearing or questions about the facility and its accessibility, please contact Stacy Greendlinger (see below).

*Public Informational Meeting  
Wednesday - Oct. 27, 2010  
at 7 p.m.*

*Formal Public Hearing  
Tuesday - Nov. 9, 2010  
at 7 p.m.*

*Both will take place at:  
Billerica Town Hall Auditorium  
365 Boston Road  
Billerica, MA 01821*

### SUMMARY OF THE PROPOSED PLAN

The proposed sediment cleanup and groundwater monitoring action includes:

- Excavating about 7,400 cubic yards of B&M Pond contaminated sediment with on-site or off-site disposal and if necessary, dewatering sediment before disposal. Restoring impacted wetlands.
- Monitoring natural recovery in Unnamed Brook and associated wetlands. Implementing stormwater runoff controls to prevent sediment recontamination.
- Monitoring groundwater to ensure contamination doesn't move beyond site boundary. Implementing land use restrictions to protect monitoring wells and stormwater controls and restrict contaminated groundwater use.
- Assessing cleanup protectiveness every 5 years.

Proposed cleanup plan approximate cost is \$5.4 million. A detailed description begins on page 3.

*continued >*

#### KEY CONTACTS:

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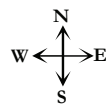
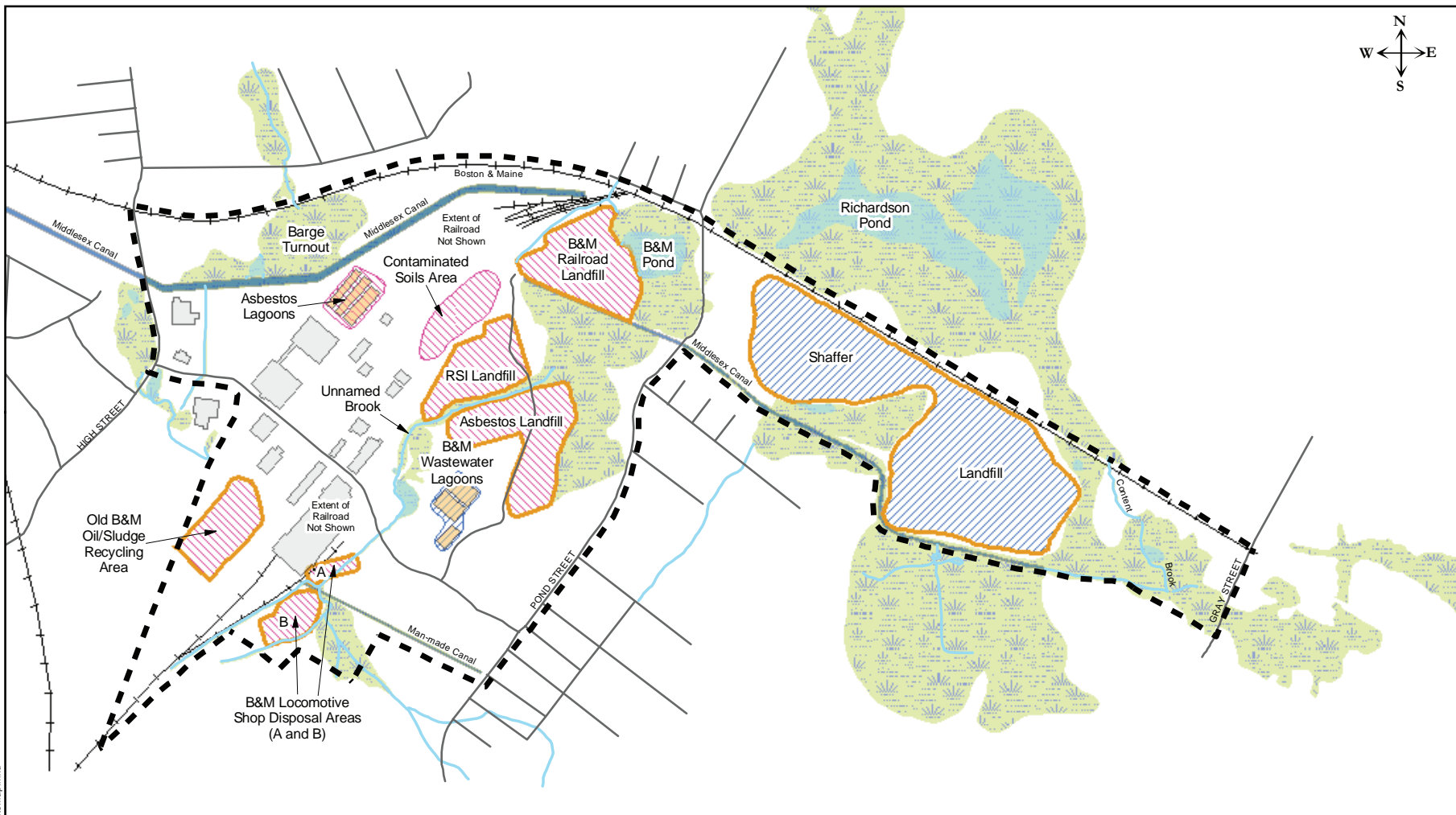
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sites/ironhorse



### LEGEND

- |                        |               |                   |
|------------------------|---------------|-------------------|
| Site Boundary          | Surface Water | Building          |
| Roads                  | Wetlands      | Cleanup Completed |
| Railroad               | Lagoon        | Cleanup Under Way |
| Disposal Area Boundary |               |                   |

## Iron Horse Park Superfund Site Map

In accordance with Section 117 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the law that established the Superfund program, this document summarizes EPA's cleanup proposal. For detailed information on the options evaluated for use at the site, see the Iron Horse Park Superfund Site Feasibility Study available for review online at [www.epa.gov/region1/superfund/sites/ironhorse](http://www.epa.gov/region1/superfund/sites/ironhorse) or at the information repositories at the Billerica Public Library, 15 Concord Road and at EPA New England, Records Center, 5 Post Office Sq., First Floor, Boston.

## A CLOSER LOOK AT EPA'S PROPOSED APPROACH

The Iron Horse Park Superfund Site is organized as:

1. B&M Wastewater Lagoons (Operable Unit 1): removal of contaminated soil for off-site asphalt batching completed.
2. Shaffer Landfill (Operable Unit 2): construction of cap and leachate/gas collection system completed and maintenance and monitoring ongoing.
3. Source Areas (Operable Unit 3): cleanup involves capping of 7 source areas with construction at one area and design for other areas underway. Source areas include: B&M Railroad Landfill; Asbestos Lagoons; Contaminated Soils Area; RSI Landfill; Asbestos Landfill; Old B&M Oil/Sludge Recycling Area; B&M Locomotive Ship Disposal Areas.
4. Site Groundwater and Sediment (Operable Unit 4): subject of this proposed plan.

The first three operable unit cleanups have been and are being implemented by Responsible Parties with oversight by EPA and Massachusetts Department of Environmental Protection (Mass-DEP). After careful study of surface water, sediment and groundwater at the Iron Horse Park Superfund Site, EPA determined there is not an unacceptable risk from exposure to surface water, therefore this proposal addresses site groundwater and sediment. The Site Groundwater and Sediment Remedial Investigation determined the extent and nature of the site's contamination and was used to inform a Feasibility Study which identified all of the alternatives EPA considered for site groundwater and sediment. These alternatives are different combina-

tions of plans to restrict access to, remove, or contain contamination to protect public health and the environment by preventing risk of exposure from the site.

EPA's preferred approach to address the Site Groundwater and Sediment, Operable Unit 4, of the Iron Horse Park Superfund site is a combination of Sediment Alternative SD-4: B&M Pond Sediment Removal & Stormwater Controls with Monitored Natural Recovery and Groundwater GW-2: Limited Action for Groundwater.

## PROPOSED COMPONENTS

The estimated cost of this preferred plan, including construction, operation and maintenance, and long-term monitoring is approximately \$5.4 million. Each component of the preferred approach is outlined below and is discussed in the Feasibility Study in greater detail. EPA is also seeking public comment concerning its determination that the alternatives chosen are the least damaging practicable alternatives for protecting wetland resources and its proposed finding under the Toxic Substances Control Act (40 C.F.R. Part 761) that the risk-based PCB cleanup level for sediment will not pose an unreasonable risk of injury to health or the environment. Discussion of these issues can be found on page 4.

### Groundwater Alternative GW-2: *Limited Action for Groundwater*

A Limited Action is proposed for site groundwater and would involve monitoring to confirm that contaminants do not move beyond a site-wide "Compliance Zone." Groundwater standards do not have to be met within the Compliance Zone which is bounded by Site Groundwater and Sediment, Operable Unit 4 (see Figure 2) and encompasses all of the seven source areas being addressed through the Source Areas Operable Unit 3 cleanup. Monitoring wells, already required by the Source Areas Operable Unit 3 cleanup, would be supplemented by additional wells to confirm that contaminated site groundwater is not moving beyond the Compliance Zone. These wells would be installed primarily in the bedrock where groundwater flows

because bedrock groundwater has the most potential to flow off-site (whereas groundwater movement through shallower soil or other material above the bedrock is limited by surrounding waterbodies and wetlands). Groundwater flows to the east or northeast towards Pond Street. Presently, no risks from groundwater exposure have been identified outside of the designated Compliance Zone where groundwater standards must be met; therefore there is not a need to take any cleanup action. Institutional Controls, which are land use restrictions (such as restrictions placed on a deed or enacted through a Town ordinance), would be necessary to prevent the use of on-site groundwater within the Compliance Zone and to protect the monitoring wells. Statutorily required reviews would be conducted every five years to ensure the limited action groundwater approach remains protective of human health and the environment.

The estimated cost for GW-2: Limited Action for Groundwater is \$1.3 million.

### Sediment Alternative SD-4:

#### *B&M Pond Sediment Removal and Stormwater Controls with Monitored Natural Recovery*

EPA is proposing excavating approximately 7,400 cubic yards of contaminated B&M Pond sediment through either dredging or dry excavation techniques. Dry excavation would involve driving in sheet metal around the contaminated area, pumping out the water, and excavating the contaminated sediment. Dewatering, which is a process that removes excess water from excavated material, likely would be needed. Following dewatering, excavated sediment ideally would be placed under one of the Source Areas Operable Unit 3 caps. If an on-site disposal area is not available, the dewatered sediment would be transported to an off-site licensed disposal facility. Due to excavation disturbance, wetland restoration would be performed including replacement of excavated sediment with clean fill and, if needed, revegetation to restore wetland functions and quality.

The Unnamed Brook and associated wetlands to the south of the Middlesex Canal are expected to recover naturally over time from contaminant levels that pose an unacceptable risk.

**Monitored Natural Recovery** uses natural processes to contain the spread of contamination and reduces the concentration and amount of pollutants at contaminated sites. Monitored Natural Recovery includes natural physical, biological, and chemical processes. Sedimentation is an example of a physical process where new layers of sediment cover the contaminated sediment layers, thereby protecting organisms from being exposed to contaminants. A biological process called biodegradation involves the native organisms that live in soil and groundwater and use some site pollutants for food. When they completely digest the pollutants, they can change them into water and harmless gases. Additionally, pollutants can stick or sorb to soil, which holds them in place. This chemical process does not clean up the pollutants, but it can keep them from leaving the site. Monitored Natural Recovery works best where the source of pollution has been removed which would occur with the nearby Source Areas Operable Unit 3 cleanup and the construction of stormwater controls to prevent new pollutants from draining into the wetland. Regular monitoring is needed to make sure pollution doesn't leave the site. Physical and chemical monitoring would assess the progress of natural recovery and the stormwater runoff controls would be implemented to control sediment recontamination.

Institutional Controls, which are land use restrictions (such as restrictions placed on a deed or enacted through a Town ordinance), would be necessary to protect the stormwater controls. Statutorily required reviews would be conducted every five years to ensure the sediment excavation, stormwater runoff controls, and monitored natural recovery actions remain protective of human health and the environment. EPA estimates that contaminant levels that are protective of the environment will be achieved in less than twenty years.

The estimated cost for Sediment Alternative SD-4: B&M Pond Sediment Removal and Stormwater Controls with Monitored Natural Recovery is \$4.07 million.

## POTENTIAL IMPACTS

The proposed Limited Action for Groundwater involves installing and monitoring groundwater

monitoring wells. Installation would take about a month and would use a truck- or track-mounted drill rig on the site. The impact from a drill rig is the same as any truck operating on the site.

The proposed B&M Pond Sediment Removal and Stormwater Controls with Monitored Natural Recovery actions would entail on-site construction of temporary roads, a staging pad for handling excavated material, and erosion control measures. Vehicles accessing the site would use the existing entrance and EPA would work with town officials to determine the best routes to and from the site to minimize any traffic concerns. If excavated material is transported off-site instead of being capped on-site, it would take 200 to 350 truck loads about a month to transport the approximately 7,400 cubic yards of material. During the cleanup design, EPA may also evaluate the ability to transport some materials via railroad instead of trucks. Based on the excavation location, neither neighbors nor businesses should hear the construction or excavation activities. Additionally, because the excavated material would be wet, excavation would not cause any dust, and since the contaminants of concern in the sediment do not volatilize, there would not be any airborne transport of contamination.

## SITE DESCRIPTION

The approximately 553-acre Iron Horse Park Superfund Site in North Billerica, Massachusetts, is about 20 miles northwest of Boston. The site has an abundance of wetlands and is bounded on the north by the MBTA railroad tracks, on the west by High Street and an auto salvage yard, on the east by Gray Street, and on the south by a wetland, Pond Street, and the Middlesex Canal (see p.2). The Middlesex Canal flows through the site to the east, where it joins Content Brook at the southeastern edge of the Shaffer landfill.

Iron Horse Park's long history of rail and other industrial and commercial operations continues to this day. Current operating businesses include a rail operation, lumber companies, and manufacturers. Portions of the site, particularly along Pond Street, are undeveloped; however, the future property use is anticipated to remain as commercial/industrial.

### Public Notice of Impacts to Wetlands

Section 404 of the Clean Water Act, Federal Executive Order 11990 (Protection of Wetlands), require a determination that there is no practical alternative to taking federal actions in wetland areas. Through its analysis of the Remedial Investigation data as well as the human health and ecological risk assessments, EPA determined there is no practical alternative to conducting work in the wetlands because sediment contamination in B&M Pond, Unnamed Brook and other wetland areas pose an unacceptable ecological risk. *Through this Proposed Plan, EPA is specifically soliciting public comment concerning its determination that the alternatives chosen are the least environmentally damaging practicable alternatives for protecting wetland resources.*

Once EPA determines that there is no practical alternative to conducting work in wetlands, EPA is then required to minimize potential harm or avoid adverse effects to the extent practicable. Best management practices would be used to minimize adverse impacts on the wetlands, fish and wildlife, and habitat. Damage to these wetlands would be mitigated through erosion control measures and proper re-grading. Re-planting of the impacted areas with native species potentially may be required, if they cannot re-establish naturally. Following excavation activities, wetlands would be restored or replicated consistent with federal and state wetlands protection laws and to ensure that there is no lost flood storage capacity. See *Sediment Cleanup Alternatives Comparison* on pages 9-10 for further discussion on wetland impacts.

### Proposed Finding: PCB Cleanup Level is Protective

Through this Proposed Plan, EPA is specifically soliciting public comment concerning its proposed finding under the Toxic Substances Control Act (40 CFR Part 761) that the risk-based PCB cleanup level of 1 milligram/kilogram for PCBs in contaminated sediment at this site will not pose an unreasonable risk of injury to health or the environment. Reducing PCBs at the site to below this level will prevent unhealthy exposure both to people and the environment and is consistent with other cleanups involving PCBs around the country.



## WHY CLEANUP IS NEEDED

### Risk and Exposure Pathways Considered

Exposure occurs when people eat, drink, breathe or have direct skin contact with a substance or waste material. Based on existing or anticipated future land use, EPA develops different possible exposure scenarios to determine possible risk, the appropriate cleanup levels, and potential cleanup approaches to meet the determined site cleanup goals. Human health and ecological risk assessments have been prepared to determine if and where there are current or potential future unacceptable risk(s) at the site from exposure to contamination based upon a number of circumstances or exposure scenarios.

### Risk from Site Groundwater and Sediment, Operable Unit 4

EPA identified no significant risk from migration of vapors from groundwater and the only potential risk to human health from groundwater is associated with the scenario of a potential future on-site resident using groundwater. No human health risk was identified for exposure to either sediment or surface water, although moderate ecological risk exists for the benthic invertebrates (bottom-dwelling organisms) exposed to contaminated sediment in the B&M Pond and the Unnamed Brook.

### Groundwater

Currently there are no residents on-site, so the human health risk exists when assuming a potential future use scenario. The risk from potential future residential use of on-site groundwater is due to the presence of: 1,2-dichloroethane, 1,4-dichlorobenzene, benzene, carbon tetrachloride, cis-1,3-dichloropropene, tetrachloroethene, trichloroethene, vinyl chloride, atrazine, bis(2-chloroethyl)ether, dibenz(a,h)anthracene, dieldrin, arsenic, cadmium, and manganese.

The potential human health risk posed by groundwater is theoretical for the following reasons:

1. The current and expected continued land use for the site is commercial/industrial and land use restrictions will be established to prevent any future use of the groundwater;
2. Massachusetts has classified the aquifer as a medium-yield underlying most of the industrial park portion of the site (see Figure 2), but has issued a use and value determination that finds that most of the

area is not considered to be a potential drinking water source; and,

3. Because of the location of landfills and their proximity to the aquifer, the rest of the aquifer is not considered a potential drinking water source.

By restricting the future use of on-site groundwater and using monitoring to determine that there are no off-site movement of groundwater that would pose a human health risk, potential future residential tap water users would not be exposed to groundwater with contaminants that are in exceedance of risk levels.

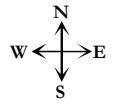
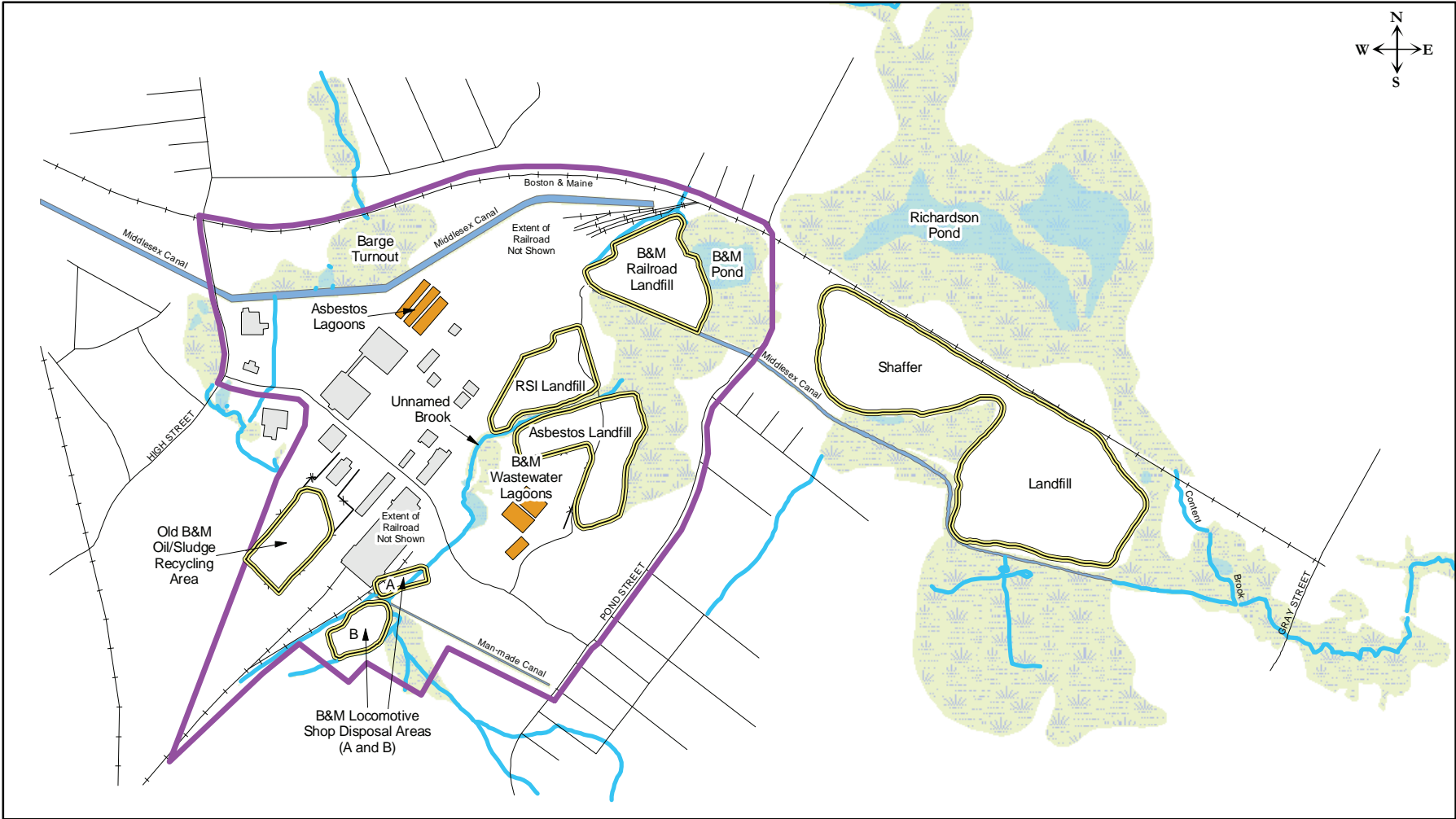
### Sediment

EPA evaluated in several ecological risk assessments whether contamination in surface water or sediment poses an unacceptable risk to animals. EPA determined that there is a moderate risk posed to bottom dwelling organisms, specifically benthic invertebrates, from exposure to contaminated sediment in the B&M Pond and the Unnamed Brook. The sediment risk is due to the presence of: PAHs, PCBs, 4,4 DDD, chromium, copper, lead, vanadium, and zinc. EPA determined there is not an unacceptable ecological risk present from exposure to surface water.

After implementation of the proposed cleanup

## Environmental Investigations and Cleanup Actions

1911 .....	B&M Railroad purchased 553 acres which now comprise site
1913.....	B&M began operations
1944 .....	B&M sold approximately 70 acres to Johns-Manville Products Corporation. Around 15 acres leased by Johns-Manville from B&M for use as asbestos-waste landfill
1960s .....	B&M sold additional parcels including about 106 acres to Graypond Realty Trust (Later under Superfund, parcel became Shaffer Landfill, Operable Unit 2)
1976 .....	B&M sold MBTA approximately 150 acres
1984 .....	Iron Horse Park placed on Superfund National Priorities List. Asbestos Landfill capped by EPA in short-term cleanup action
1988 .....	B&M Wastewater Lagoons, Operable Unit 1, Remedial Investigation/Feasibility Study complete. B&M Wastewater Lagoons, Operable Unit 1, cleanup plan chosen
1990 .....	Shaffer Landfill, Operable Unit 2, Remedial Investigation/Feasibility Study complete
1991 .....	Shaffer Landfill, Operable Unit 2, cleanup plan chosen
2003.....	B&M Wastewater Lagoons, Operable Unit 1, cleanup complete
2003.....	Shaffer Landfill, Operable Unit 2, construction complete
2004.....	Source Areas, Operable Unit 3, Remedial Investigation/Feasibility Study complete. Source Areas, Operable Unit 3, cleanup plan chosen
2010 .....	Source Areas, Operable Unit 3, cap construction underway for 1 source area; design underway at remaining 6 areas



### LEGEND

- |                          |                            |            |
|--------------------------|----------------------------|------------|
| — Road                   | — Compliance Zone Boundary | ■ Building |
| — Railroad               | ■ Surface Water            | ■ Canal    |
| — Stream                 | ■ Lagoon                   | ■ Wetland  |
| — Fence                  |                            |            |
| — Disposal Area boundary |                            |            |

## Iron Horse Park Superfund Site Groundwater

at the B&M Pond, benthic invertebrates would not be exposed to contaminants at concentrations where adverse effects are predicted. Further degradation of the Unnamed Brook and associated wetlands would be prevented through stormwater controls and completion of the Source Areas Operable Unit 3 cleanup. This would permit the wetland system to naturally recover and achieve sediment cleanup standards in less than twenty years.

## ALTERNATIVES CONSIDERED

A more detailed description and analysis of each alternative developed to reduce risks from contaminated groundwater and sediment is presented in the Feasibility Study report, which is also available for public review. Outlined below is a short synopsis of considered alternatives.

### Groundwater Alternatives

#### *GW-1: No Action*

The No Action alternative is required, by the Superfund law, to be evaluated and is used as a baseline for comparison to other cleanup alternatives. This alternative would not include any action, although statutorily required five-year reviews still would be conducted. Under the Source Areas Operable Unit 3 cleanup, groundwater monitoring of the seven source areas is still required. Except for the cost of five-year reviews, there is no cost associated with this alternative.

#### *GW-2: Limited Action for Groundwater*

This is EPA's preferred alternative. Please see page 3 for more information.

### Sediment Cleanup Alternatives

#### *SD-1: No Action*

The No Action alternative is required, by the Superfund law, to be evaluated and is used as a baseline for comparison to other cleanup alternatives. This alternative would not include any further cleanup, although statutorily required five-year reviews still would be conducted. Except for the cost of five-year reviews, there is no cost associated with this alternative.

#### *SD-4: B&M Pond Sediment Removal and Stormwater Control with Monitored Natural Recovery*

This is EPA's preferred alternative. Please see page 3 for more information.

## THE NINE CRITERIA FOR CHOOSING AN ACTION

EPA uses nine criteria to compare alternatives and select a final action. EPA has already evaluated how well each of the alternatives developed for the Iron Horse Park Superfund Site meets the first seven criteria (see tables on page 9). Once comments from the state and the community are received, EPA will select which alternatives will be chosen.

1. Overall protection of human health and the environment: Will it protect you and the plant and animal life on and near the site? EPA will not choose a plan that does not meet this basic criterion.
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs): Does the alternative meet all federal environmental and state facility siting and environmental statutes, regulations and requirements? The chosen cleanup plan must meet this criterion.
3. Long-term effectiveness and permanence: Will the effects of the plan last or could contamination cause future risk?
4. Reduction of toxicity, mobility or volume through treatment: Using treatment, does the alternative reduce the harmful effects of the contaminants, the spread of contaminants, and the amount of contaminated material?
5. Short-term effectiveness: How soon will site risks be adequately reduced? Could the cleanup cause short-term hazards to workers, residents or the environment?
6. Implementability: Is the alternative technically feasible? Are the right goods and services (i.e. treatment machinery, space at an approved disposal facility) available for the plan?
7. Cost: What is the total cost of an alternative over time? EPA must find a plan that gives necessary protection for a reasonable cost.
8. State acceptance: Do state environmental agencies agree with EPA's proposal?
9. Community acceptance: What objections, suggestions or modifications do the public offer during the comment period?

#### *SD-6: B&M Pond and Unnamed Brook Sediment Removal*

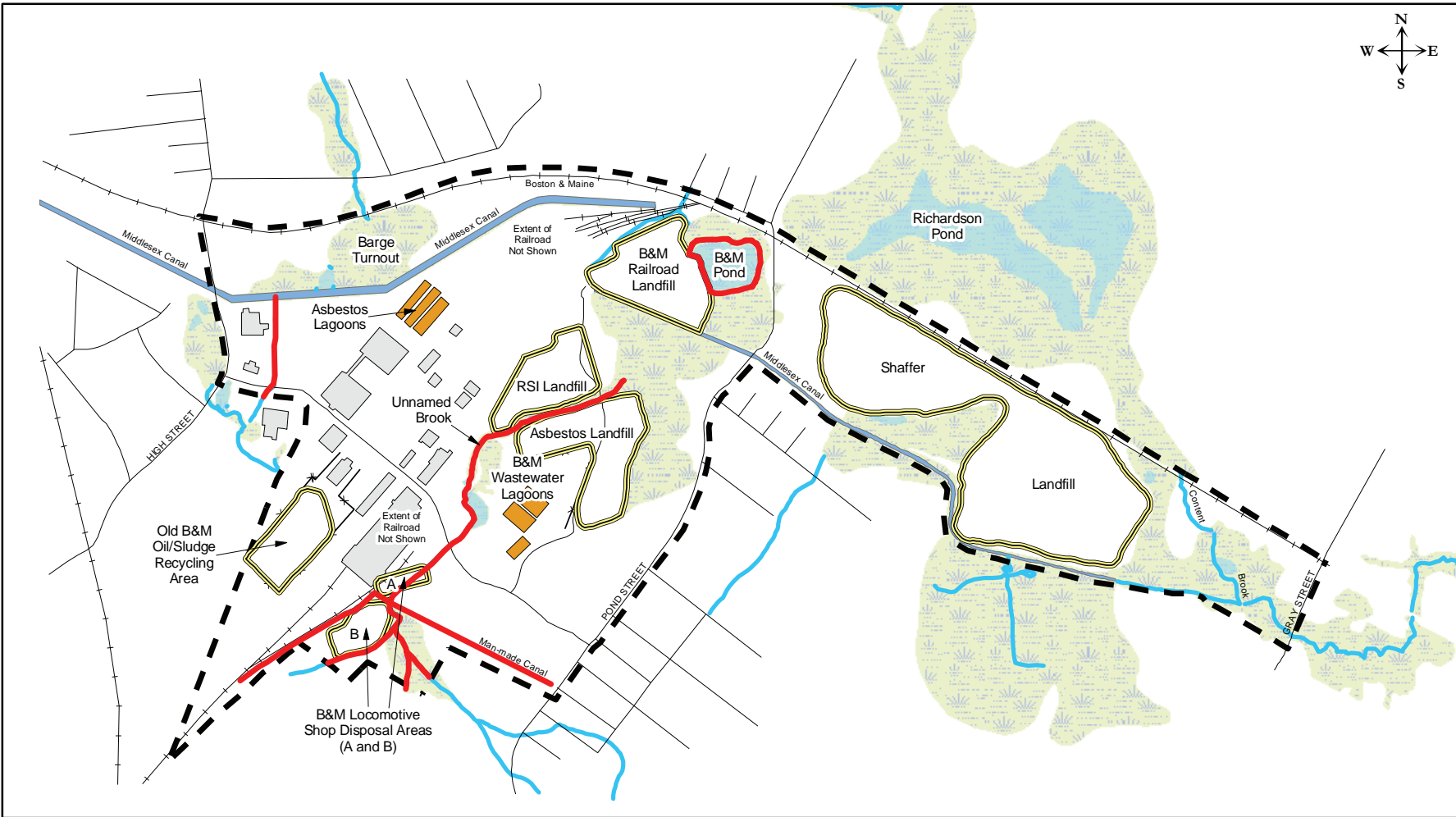
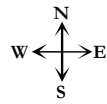
This alternative would involve not only the excavation of contaminated B&M Pond sediment, but would also include sediment removal along the Unnamed Brook and associated wetlands where sediment contaminants exceed cleanup levels. Following de-watering (a process which removes excess water), excavated sediment ideally would be placed under one of the Source Areas Operable Unit 3 caps, if they are available. If an on-site disposal area is not available, the dewatered sediment would be transported to an off-site licensed disposal facility. Should off-site disposal occur, then no five-year reviews would be required because no contamination that poses a risk would remain. If sediment is placed under a source area cap, that portion of

the sediment cleanup would be assessed every five-years as part of the Source Areas Operable Unit 3 review. Wetland restoration would be performed, including replacement of excavated sediment with clean fill and revegetation, if required, to restore wetland functions and quality. Stormwater runoff controls would also be implemented to prevent sediment recontamination and land use restrictions would be established to protect the stormwater controls. The time to achieve cleanup objectives is estimated at less than 5 years.

The estimated cost is \$5.41 million.

## GROUNDWATER ALTERNATIVES COMPARISON

Aside from No Action and Limited Action for



### LEGEND

- |                          |  |            |
|--------------------------|--|------------|
| — Road                   | — ■ Iron Horse Site Boundary                           | ■ Building |
| —+— Railroad             | □ Extent of Sediment Potentially Requiring Remediation | ■ Canal    |
| — Stream                 | ■ Surface Water  | ■ Wetland  |
| —x— Fence                | ■ Lagoon   |            |
| — Disposal Area boundary |  |            |

## Iron Horse Park Superfund Site Proposed Extent of Sediment Cleanup



Groundwater, no additional groundwater alternatives were carried forward because contaminated groundwater is restricted to areas of the site within the Compliance Zone for the Source Areas Operable Unit 3 cleanup. Therefore, federal and state treatment requirements for drinking water do not apply, only standards for groundwater monitoring and land use restrictions. Some of the monitoring costs to achieve the groundwater cleanup objectives are already incorporated in Source Areas Operable Unit 3 cleanup monitoring requirements. Alternative GW-2: Limited Action fully meets seven out of the nine selection criteria and this proposed plan is asking for state and community input to satisfy the final two criteria.

### Sediment Cleanup Alternatives Comparison

The alternatives were compared with each other to identify how well each alternative met the evaluation criteria above. Table 2 and the following discussion presents a general summary of the alternatives comparison.

#### 1. Overall Protection of Human Health and the Environment

There are no unacceptable human health risks noted to be associated with the site sediment. There are potential ecological risks due to PAHs, PCBs, pesticides, and metals in sediment. The No Action alternative would not be protective of the environment since risks posed

by the contaminated sediment would not be addressed. The two excavation alternatives (SD-4, partial excavation, and SD-6, full excavation) would be protective of ecological habitat and wildlife since contaminated sediment exceeding ecological risk levels would be removed. The partial excavation alternative which relies on natural recovery to address the less contaminated sediment would be protective since an estimate of the time frame to achieve cleanup levels is less than 20 years.

#### 2. Compliance with Applicable or Relevant and Appropriate Requirements

The No Action alternative fails to address federal environmental and state facility siting and environmental statutes, regulations and requirements. Under both the SD-4 and SD-6 alterna-

**Table 1**  
**Comparison of Groundwater Protection Alternatives**

Nine Criteria	GW-1 No Action	~GW-2 Limited Action
Protects human health & environment	↓	Y
Meets federal & state requirements	↓	Y
Provides long term protection	↓	Y
Reduces mobility, toxicity & volume	↓	↓
Provides short-term protection	Y	Y
Implementable	Y	Y
Cost (millions)	\$0.03	\$1.3
State agency acceptance	To be determined after the public comment period	
Community Acceptance	To be determined after the public comment period	

~ EPA's preferred option      Y Meets or exceeds criterion  
 ° Partially meets criterion      ↓ Does NOT meet criterion

**Table 2**  
**Comparison of Sediment Protection Cleanup Alternatives**

Nine Criteria	SD-1 No Action	~SD-4 B&M Pond Sediment Removal & Stormwater Control with MNR	SD-6 B&M Pond & Unnamed Brook Sediment Removal
Protects human health & environment	↓	Y	Y
Meets federal & state requirements	↓	Y	Y
Provides long term protection	↓	Y	Y
Reduces mobility, toxicity & volume	↓	°	°
Provides short-term protection	°	°	°
Implementable	Y	Y	Y
Cost (millions)	\$0.03	\$4.1	\$5.4
State agency acceptance	To be determined after the public comment period		
Community Acceptance	To be determined after the public comment period		

° Partially meets criterion      Y Meets or exceeds criterion  
 ↓ Does NOT meet criterion  
 ~ EPA's preferred option and least environmentally damaging practicable alternative for protecting wetland resources.

tives, these standards would be met. Compliance for SD-4 would take up to twenty years and SD-6 would occur upon completion of the cleanup. However, Alternative SD-4 was determined to be the least environmentally damaging alternative for protecting wetland resources, balancing permanent removal of the more contaminated sediment, while allowing less contaminated wetlands to remain undisturbed so that natural processes, in concert with stormwater and source controls, can reduce contaminants to below cleanup levels.

Cleanup levels for PCBs have been established at a level so that they would not pose an unreasonable risk of injury to health or the environment.

### 3. Long-Term Effectiveness and Permanence

The No Action alternative is the least protective alternative because no measures would be taken to remove contaminants. Both the SD-4 and SD-6 alternatives would significantly reduce ecological risks for B&M Pond and Unnamed Brook sediment. The SD-4 alternative would reduce residual risk to acceptable levels for Unnamed Brook and associated wetlands within 20 years, whereas the SD-6 alternative would achieve that reduction by the conclusion of the cleanup excavation.

### 4. Reduction of Toxicity, Mobility, or Volume through Treatment

None of the alternatives evaluated provide a reduction of toxicity, mobility or volume of contaminants through treatment unless, under the SD-4 and SD-6 alternatives, a bulking material, such as cement, is added to excavated sediment prior to disposal to reduce the mobility of contaminants.

### 5. Short-Term Effectiveness

There will be no additional short-term risks under the No Action alternative.

Short-term community risks associated with environmental monitoring for the two excavation alternatives would be minor. However, if off-site sediment disposal occurs, it would result in increased local truck traffic, with the SD-6 alternative having a greater increase in truck traffic than the SD-4 alternative. Workers at the site would use appropriate protective gear to protect against any potential risks from exposures to sediment contaminants during any monitoring and excavation activities.

With regard to environmental impacts, alternatives SD-4 and SD-6 differ in the magnitude of potential impacts to natural habitats, with SD-6 having a significantly greater impact due to complete excavation of contaminated sediment which would require additional access roads and cause significant wetland disruption. Wetland restoration would be performed under both SD-4 and SD-6. However, significantly greater restoration would be necessary under the SD-6 alternative due to the more extensive excavation. There would be no short-term impacts from the No Action alternative.

EPA estimates that cleanup objectives would be achieved under alternative SD-4 in less than 20 years. Under alternative SD-6, objectives would be achieved upon completion of excavation, which is assumed to be less than 5 years. Cleanup objectives would not be achieved under the No Action alternative.

### 6. Implementability

The No Action alternative would be the easiest to implement as no actions are required, except for five-year reviews, which would be easily implemented.

Alternative SD-4 would be easier to construct than alternative SD-6 because with fewer areas targeted for excavation, there would be significantly fewer access difficulties. Both alternative SD-4 and SD-6 are considered reliable. The reliability of alternative SD-4 is based on available site data, while the reliability of alternative SD-6 is based on the removal of all targeted contaminated sediment.

The ease of undertaking additional cleanup actions, if warranted, is not impacted by either alternative SD-4 or SD-6.

Both SD-4 and SD-6 may need administrative review regarding disposal of contaminated sediment and water from dewatering off-site. Under SD-4 institutional controls would also need to be established to protect proposed stormwater controls. If on-site disposal is utilized, institutional controls for the on-site disposal site would be addressed under the Source Areas Operable Unit 3 cleanup.

Regarding the availability of services and materials, alternative SD-4 and SD-6 are very similar. The required services and materials would be the same, though alternative SD-6 would involve a greater volume of sediment.

### 7. Cost

The No Action alternative carries no additional cost, other than the cost of five-year reviews. The estimated cost for alternative SD-4 is \$4.1 million, while alternative SD-6 is estimated at \$5.4 million.

### 8. State Acceptance

Acceptance of the preferred alternative by the Commonwealth of Massachusetts will be determined during the comment period.

### 9. Community Acceptance

Community acceptance will be evaluated based on feedback received during the comment period.

## WHY EPA RECOMMENDS THIS PROPOSED PLAN

Based on the results of the Remedial Investigation and human health and ecological risk assessments, EPA has reviewed the Feasibility Study and recommends this proposed approach of SD-4: B&M Pond Sediment Removal and Stormwater Control with Monitored Natural Recovery and GW-2: Limited Action for Groundwater for the Iron Horse Park Superfund site because EPA believes it achieves the best balance among EPA's nine criteria used to evaluate various alternatives.

The proposed alternatives are protective of both human health and the environment while, at the same time, are cost effective. This cleanup plan provides both short and long-term protection of human health and the environment; attains federal and state applicable or relevant and appropriate requirements (ARARs); reduces the toxicity, volume, and mobility of contaminated soil and sediment through treatment, to the maximum extent practicable; utilizes permanent solutions and uses institutional controls to prevent unacceptable exposures.

Although SD-4 and SD-6 are both protective of human health and the environment, the primary differences between the two are with regards to wetlands impacts, transportation, and cost. SD-4 involves significantly less impacts to wetlands due to a smaller area being subject to excavation and the lack of significant access obstacles, while still providing protection via natural recovery. Because of this, there will be

less wetland restoration required, less handling of contaminated sediment, and less transportation costs. As to groundwater, GW-2 is protective of human health because it prevents contact with contaminated groundwater within the Compliance Zone for the Source Areas Operable Unit 3, whereas GW-1 is not.

### WHAT IS A FORMAL COMMENT?

During the 30-day formal comment period, EPA will accept formal written comments and hold a hearing to accept formal verbal comments. EPA uses public comments to improve the cleanup proposal.

To make a formal comment you need only speak during the public hearing on Tuesday, November 9, 2010 or submit a written comment during the comment period, October 26 through November 24, 2010.

Federal regulations require EPA to distinguish between "formal" and "informal" comments. While EPA uses your comments throughout site investigation and cleanup, EPA is required to respond to formal comments in writing only. EPA will not respond to your comments during the formal hearing on Tuesday, November 9, 2010.

The fact that EPA responds to formal comments in writing only does not mean that EPA can not answer questions. EPA will be holding an informational meeting prior to start of the formal hearing portion of the November 9, 2010 meeting. Additionally, once the meeting moderator announces that the formal hearing portion of the meeting is closed, EPA can respond to informal questions.

EPA will review the transcript of all formal comments received at the hearing, and all written comments received during the formal comment period, before making a final decision. EPA will then prepare a written response to all the formal written and oral comments received.

Your formal comment will become part of the official public record. The transcript of comments and EPA's written responses will be issued in a document called a Responsiveness Summary when EPA releases the final cleanup decision.

### FOR MORE INFORMATION

To help the public understand and comment on the proposal for the site, this publication summarizes a number of reports and studies. All of the technical and public information publications prepared to date for the site are available at the following information repositories:

#### EPA Records Center

5 Post Office Square, Suite 100  
Mail Code: OSRR02-3  
Boston, MA 02109-3912

Ph. (617) 918-1440

Hours: 9:00 a.m.-5:00 p.m.  
Monday through Friday

Information is also available for review at:  
[www.epa.gov/region1/superfund/sites/ironhorse](http://www.epa.gov/region1/superfund/sites/ironhorse)

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#### Billerica Public Library

15 Concord Road, Billerica, MA

Ph. (978) 671-0948

### SEND US YOUR COMMENTS

Provide EPA with your written comments about the proposed plan for the Iron Horse Park Superfund site.

Please email ([mcelroy.don@epa.gov](mailto:mcelroy.don@epa.gov)) fax (617-918-0326) or mail comments, postmarked no later than Wednesday, November 24, 2010 to:

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